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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,638	12/21/2001	Charles J. Persico	010286	1499

23696 7590 03/23/2005

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER

NGUYEN, THUAN T

ART UNIT PAPER NUMBER

2685

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



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Commissioner of Patents and Trademarks

Office Action Summary

Application No.

10/027,638

Applicant(s)

PERSICO, CHARLES J.

Examiner

THUAN T. NGUYEN

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 18-22 and 28-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 18-22 and 28-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Remark

1. Applicants elects without traverse claims 1-5, 18-22, and 28-32 for examination, and claims 6-17 and 23-27 were canceled. Please disregard the previous office action.

Claim Rejections - 35 USC 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 18-22, and 28-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Haugli et al. (U.S. Patent No. 5,914,944).

Regarding claim 1, Haugli discloses a method for receiving a first signal having a first frequency and receiving a second signal having a second frequency, the first and second frequency being different from a frequency of an incoming RF signal, i.e., as shown in Fig. 3, remote wireless terminals 20 communicate to station 11 via satellite 18 with links 19, links 19 are RF signals (col. 6/lines 10-35), and remote wireless terminals (as shown in Fig. 4), with a quadrature detector 56 provides two separate I and Q signals with different frequencies and they are also different in frequency to the received RF signals due to the fact of being downconverting to IF signals (col. 7/lines 5-37); and generating at least one local oscillator (LO) signal having a frequency determined as a function of the first and second frequencies, and at least one baseband signal as a function of the local oscillator and the RF signal is generated (Fig. 4, and col. 7/lines

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5-37 for LO 64 and frequency synthesizer 55 in providing, and applying the LO oscillator signal to the quadrature detector 56 for generating baseband signal under the control of frequency controller 65).

As for claim 2, Haugli further discloses wherein the frequency of the local oscillator signal is one of a sum and a difference of the first and second frequencies, i.e., Figure 11 shows a computer algorithm in estimating the sum and the difference of the first and second frequencies as IF signals are transmitted in unique words or frames, and the error estimates are corrected for the voltage controlled LO reference crystal oscillator (col. 12/lines 32-64).

As for claim 3, Haugli further discloses wherein generating of the local oscillator signal comprises generating an in-phase LO signal and a quadrature LO signal (col. 7/lines 15-37; and col. 11/lines 10-38 for I and Q components).

As for claim 4, Haugli further discloses comprising applying the LO signal to convert the RF signal down to an in-phase baseband signal and a quadrature baseband signal (col. 7/lines 15-37 for downconverting to I and Q baseband signals; and col. 11/lines 10-38 for I and Q components).

As for claim 5, Haugli further discloses comprising a quadrature representation of at least one of the first and second signals (Fig. 4 for a quadrature detector 56 for the representation of at least one of the first and second signals).

Regarding claims 18-23 for the processor readable medium applied the same method, and claims 28-32 for an apparatus applied the same technique are rejected for the reasons given in the scope of claim 1-5 as discussed in details above.

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Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Damgaard et al and Carr et al. (in PTO 892 attached) disclose systems related to I and Q components.

5. **Any response to this action should be mailed to:**


Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to: (703) 872-9306, (for Technology Center 2600 only)

*Hand-delivered responses should be brought to Crystal Park II,
2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (703) 308-5860. The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM, with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.


TONY T. NGUYEN
PATENT EXAMINER

Tony T. Nguyen
Art Unit 2685
March 10, 2005